

2.0 NEPA REQUIREMENTS: ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES

An environmental assessment (EA) is required by the National Environmental Policy Act of 1969 (NEPA) to determine whether the action considered will result in significant impacts on the human environment. If the action is determined not to be significant based on an analysis of relevant considerations, the EA and resulting finding of no significant impact (FONSI) would be the final environmental documents required by NEPA. An environmental impact statement (EIS) must be prepared for major Federal actions significantly affecting the human environment. A final supplemental EIS for the Alaska groundfish fisheries, dated December 1998, was approved by NMFS and the Notice of Availability was published December 24, 1998. (63 FR 71285).

An EA must include a brief discussion of the need for the proposal, the alternatives considered, the environmental impacts of the proposed action and the alternatives, and a list of document preparers. The purpose and alternatives were discussed in Sections 1.1 and 1.2, and the list of preparers is in Section 5. The following section contains the discussion of the environmental impacts of the alternatives, including impacts on threatened and endangered species and marine mammals.

2.1 Environmental Impacts of the Alternatives to Describe and Identify EFH

The environmental impacts generally associated with fishery management actions include: (1) changes in availability of food to predators and scavengers, changes in the population structure of target fish stocks, and changes in the marine ecosystem community structure resulting from harvest of fish stocks; (2) changes in the physical and biological structure of the marine environment as a result of fishing practices (e.g. using certain kinds of gear, discarding fish processing waste); and (3) entanglement/entrapment of non-target organisms in active or inactive fishing gear.

2.1.1 Physical Environment

The areas identified as EFH will be a subset of the habitat currently or historically used by fish managed under the Magnuson-Stevens Act. Because of the large variability in the fish species managed under the Magnuson-Stevens Act, the areas identified as EFH will encompass a wide range of aquatic habitats. These include streams and rivers supporting anadromous fish species; marine and estuarine habitat types such as seagrass beds, coral reefs, tidal marshes, coastal wetlands, submerged aquatic vegetation, cobble with attached fauna, dense mud and clay burrows; and oceanic banks and continental shelf or slope areas extending to the 200-mile EEZ. Aquatic areas that do not currently support fish, but that have historically done so, and that could support fish if restored, may also be identified as EFH. The environment directly affected by the plan amendments are likely to be primarily marine and estuarine habitats. Some of the species managed under the Magnuson-Stevens Act are anadromous fish, such as salmon, which spend most of their lives in the marine environment, but migrate to fresh water streams for spawning. For these species, it is likely that EFH will be identified in some fresh water streams in coastal and inland states.

In the case of riverain habitat, which is particularly important to anadromous fish, habitat loss has resulted from loss of access for fish, water pollution, inadequate flow, and physical destruction of habitat. The Pacific coast has well-known examples of fisheries resources damaged by loss of access to habitat and degradation of available habitat.

Activities which have been determined to have an adverse impact on EFH may be redirected to other areas such as uplands or aquatic areas not identified as EFH. Through this process, a regulation could

indirectly affect almost any part of the coastal watershed of the United States, although the areas most likely to be affected by redirected activities are coastal areas where activities likely to adversely affect EFH occur.

2.1.2 Effects on Fish Habitat

The goal of the definition and identification of EFH is to improve conservation and management recommendations to Federal agencies, state agencies, and other entities whose actions may adversely affect EFH. The achievement of this goal will depend on individual decisions made by these bodies. It is not possible to predict the nature of those future decisions for specific sites. Therefore, the consequences of the alternatives can only be addressed in a general sense.

The synthesis and publication of information on EFH and EFH conservation recommendations provided by NMFS or the Councils should strongly encourage avoidance of activities that may adversely affect fish habitat in these areas. For example, development projects that may adversely impact EFH may be set back further from the coast and may be required to provide vegetated buffers or alternate methods to treat surface runoff. EFH conservation recommendations may advise the use of environmentally sound engineering and management practices (e.g., seasonal restrictions, specific dredging methods, and disposal options) for all dredging and construction projects. EFH conservation recommendations may suggest the restoration of riparian and coastal areas through re-establishing endemic trees and other plants, and restoring natural bottom characteristics. Upland restoration measures such as erosion control, road stabilization, upgrading culverts, or modification of the operating procedures of dikes or levees to allow fish passage may be recommended as necessary to protect EFH. EFH conservation recommendations may also advise against alteration of the natural hydrology of rivers and estuaries, except to restore degraded habitat. If implemented by the action agencies, EFH conservation recommendations provided by a Council or NMFS will improve the conservation of important aquatic habitats and the associated ecosystem.

Council FMP amendments to protect EFH may exclude fishing techniques that may cause physical disturbance of the substrate, loss of and/or injury to benthic organisms, loss of prey species and/or their habitat, and changes to other components of the ecosystem. These amendments may also establish research closure areas to evaluate the impact of any fishing activities on EFH or establish marine reserves to protect certain habitat from adverse fishing impacts. All of the actions will have a beneficial effect on fish habitat and the associated ecosystems.

Preferred Alternative 2 is the most conservative program for protecting essential fish habitat. Designation of general distribution for species life stages with level 2 and higher information as EFH will trigger more consultations with NMFS on proposed actions that may adversely impact EFH. Alternative 3 would tend to trigger fewer consultations, as somewhat smaller areas would be designated as EFH.

2.1.3 Effects on Fish Populations

The EFH requirements were included in the Magnuson-Stevens Act because scientific evidence indicates that habitat loss or degradation has compounded, and in some cases magnified, the effects of increased fishing pressures. The net effect has been a decline in many of the nation's important fish stocks. Protection from further adverse impacts and restoration of degraded EFH, where feasible, should reduce some of the stress on populations, and fishery stocks should stabilize or regain some lost productivity. Evidence from boreal, temperate, and tropical regions of the world support the theory that if habitat degradation is halted or minimized, and biological integrity is restored, associated fish populations will increase both inside the protected areas and outside. This prediction is supported by more than 250 peer-

reviewed articles on recovery dynamics of marine fishery reserves (areas protected from further impacts) in studies around the world. Additional benefits that would be expected from adequate levels of habitat protection include: the restoration of the population age (or size) structure, conservation of genetic diversity in the population, development or maintenance of greater diversity in trophic structure and greater assurance of the availability of alternate trophic pathways; increased resilience for the populations to withstand both natural and anthropogenic stresses; and greater stability in both the populations or assemblages and the fishery catch.

All of the options and alternatives to the status quo would be expected to reduce some of the stress on populations, and fishery stocks should benefit in terms of long-term productivity.

2.1.4 Other Environmental Effects

The implementation of either Alternative 2 or 3 should not produce any unavoidable adverse environmental impacts. Designation of EFH is intended to protect the environment by controlling adverse physical and biological impacts on the habitat of living marine resources. Once EFH is designated, Federal agencies must consult with NMFS regarding any of their actions that may adversely affect EFH. Agencies may require changes in activities which result in degradation of coastal waters and habitats. These changes, such as directing that dredged material disposal occur away from critical coastal areas, or that disturbance to spawning areas be restricted to non-spawning seasons, would not result in any unavoidable adverse environmental impacts.

The overall purpose of these EFH designations is to conserve, protect, and restore coastal waters, and thus to enhance the long-term health of all living marine resources. These alternatives will not cause any short-term uses of the environment that would reduce long-term productivity. Short-term uses of the environment may have to be modified because of measures which result from EFH conservation recommendations or fishery management measures. The most likely consequence to non-fishing activities would be the modification or relocation of a Federally permitted activity if scientific evidence suggests that the activity would adversely affect designated EFH. For example, This may result in short-term costs to the users, but will result in long-term benefits to the economy and environment.

The alternatives analyzed in this EA will not cause any irreversible or irretrievable commitment of resources as a result of their implementation. Definitions of EFH have been proposed in this analysis, but may be revised in the future as new information becomes available.

2.2 Socioeconomic Impacts of the Alternatives

The action proposed in these alternatives is simply to describe and identify EFH for FMP species, which in and of itself will have no economic impact.

Future regulations arising from this action may have an impact on fisheries participants. The most likely short-term consequence to commercial and recreational fishermen would be the need to relocate their fishing or change their methods. If scientific evidence suggests that particular fishing gear types or methods are adversely affecting the habitat necessary to a managed species in one or more of its life stages, then seasonal, annual or permanent restrictions to minimize those impacts could be proposed. In that case, fishermen who have traditionally used the restricted area may need to increase their search or travel distance to find other suitable fishing grounds, or may need to invest in equipment more appropriate for use in the identified EFH. It is possible that restrictions will be imposed such that some fishermen will be unable to relocate or acquire new gear.

Overall, any short-term economic losses should be compensated by future increases in catch levels and increased stability in the fishery. The long-term expectation of the Magnuson-Stevens Act's EFH mandate is that declining trends in fish stocks can be halted or reversed by minimizing adverse impacts to EFH, and by restoring lost habitat or access to habitat, where feasible (in addition to management measures directed at harvest). Protecting the quality and quantity of EFH should increase the survival potential of managed fishery species, and increase the biological productivity of the ecosystem, including the stocks of managed species within that ecosystem. Increases in stock abundance and fish sizes should result in stabilization of interannual variations in catch, and increased economic return. Both alternatives to the status quo would be expected to provide long-term gains for Alaska fisheries.

This remainder of this section provides information about the fishing fleet which might be affected by future regulations related to the EFH amendments, as well as administrative, enforcement and information costs of the alternatives.

2.2.1 Alaska fishing fleet

The following tables present data summarizing the number of vessels by gear and area that harvested Alaska groundfish in the BSAI and GOA in 1996, scallops in Alaska, and crab in the BSAI.

The total number of fishing vessels was estimated based on the number of vessels that made landings in 1996. The number of catcher vessels by category was estimated using information published by NMFS for the 1996 groundfish fisheries (NMFS, 1997 - the "Economic SAFE", Table 25). The number of catcher/processors, motherships, floating processors and shoreside processors was estimated based on the number of processors submitting Weekly Production Reports for groundfish fisheries to NMFS in 1996.

Number of vessels that caught groundfish in the BSAI area in 1996, by vessel length class (measured by length overall (LOA) in feet), catcher type, and gear.				
	<60'	60-124'	>125'	Total
<u>Catcher vessels</u>				
Fixed gear	64	125	17	206
Trawl gear	6	91	31	128
<u>Catcher/processors</u>				
Fixed gear	1	21	32	54
Trawl gear	0	7	55	62
Total all vessels	71	244	135	450

Number of vessels that caught groundfish in the GOA area in 1996, by vessel length class (measured by length overall (LOA) in feet), catcher type, and gear.				
	<60'	60-124'	>125'	Total
<u>Catcher vessels</u>				
Fixed gear	1116	179	7	1302
Trawl gear	63	82	17	162
<u>Catcher/processors</u>				
Fixed gear	4	13	11	28
Trawl gear	0	7	30	37
Total all vessels	1183	281	65	1529

Number of vessels that landed scallops in Alaska in 1996 and 1997, by vessel length class (measured by length overall (LOA) in feet).				
	<60'	60-124'	>125'	Total
<u>Cook Inlet</u>				
1996	0	4	0	4
1997	1	2	0	3
<u>Outside Cook Inlet</u>				
1996	0	4	0	4
1997	0	6	0	6

Number of vessels that caught crab in the BSAI area in 1996, by vessel length class (measured by length overall (LOA) in feet), catcher type, and gear.				
	Catcher vessels			Catcher/proc.s
	<60'	60-124'	>125'	
Bristol Bay red king	0	130	62	4
Bering Sea Tanner	0	102	40	4
Bering Sea Snow crab	0	154	70	15
Norton Sound red king	41	0	0	0

Many vessels overlap, fishing both in the BSAI and the GOA. The estimated total number of participants in the BSAI and GOA groundfish fisheries is 1,686 (NMFS, 1997 - the "Economic SAFE", Table 23). An additional 3,532 commercial fishing permits were issued for the 1996 salmon fishery in southeast Alaska (164 set gillnet, 483 drift gillnet, 417 purse seine, 1,513 hand troll, 955 power troll permits). Therefore, the total universe of participants is estimated at 5,218.

2.2.2 Administrative, Enforcement and Information Costs

The proposed EFH amendment would require NMFS to implement three new functions:

1. Development and management of a EFH cumulative impacts information system which includes coordination with various Federal and State agencies.
2. Development of an EFH consultation system which includes coordination with various Federal and State agencies.
3. Review and update EFH assessments as new information becomes available, or at least once every five years.

2.2.3 Summary Findings of Economic Impacts

None of the alternatives would have an economic impact on participants in the Alaska fisheries or on other business entities, since the action proposed in these plan amendments is simply to define EFH for FMP species. However, the Alaska fishery fleet that could be affected by future regulations arising from this action are identified above.

While this specific action would not have economic impacts, it could form the basis for future actions, either regulatory measures that restrict fishing practices or recommendations to other Federal or State agencies that suggest modification of an action to protect or enhance EFH, that could have negative short-term economic impacts. Designation of EFH would result in somewhat smaller areas under Alternative 3 than under Alternative 2. The slightly larger area identified by Alternative 2 may trigger more consultations with other Federal and State agencies on proposed actions that could adversely affect designated EFH. Recommendations that result from these consultations could suggest modifications to the proposed action that could result in increased economic costs. However, the EFH consultation process does not require the Federal or State action agency to implement the recommendations. Additionally, the slightly larger area identified by Alternative 2 may trigger the need for increased fishing regulations if fishing practices in the larger area adversely affect EFH found within that area. It is anticipated that any short-term negative economic impacts that result from future regulations or recommendations are offset by the long-term impacts that would result from the protection and enhancement of EFH.

2.3 Consequences of the Alternatives

The consequences of the No Action Alternative are that a program for the conservation and management of EFH in Alaska would not be implemented. Agency decision-makers would not be able to avail themselves of information on the importance of certain habitats to marine fisheries, and their decisions regarding actions that could adversely affect EFH might not give adequate consideration to the need for conservation of particular habitats. Fish populations may remain threatened by habitat loss, and additional fish populations would most likely become threatened as habitat loss continued. Commercial

and recreational fishers dependent on declining fisheries would continue to experience lost revenues and increased uncertainty. Furthermore, the Magnuson-Stevens Act requires that FMPs be amended to identify and describe EFH; failure to amend the FMPs to include EFH would place NMFS in non-compliance with a statutory requirement.

All of the options and alternatives to the status quo would be expected to benefit marine and anadromous fish populations, and provide for improved long-term productivity of the fisheries.

Alternative 2 is the most conservative alternative simply because a larger area is designated EFH for species life stage with level 2 or higher information. The larger area identified by Alternative 2 may trigger more consultations on proposed actions that could adversely affect EFH. Additionally, the slightly larger area identified by Alternative 2 may trigger the need for more fishing regulation if fishing practices within an area not included as EFH under Alternative 3 adversely affect EFH found within that area. With regards to fish production, Alternative 2 is also more likely to ensure long-term productivity of a stock because designation of the larger area would include all habitats occupied by a species that contribute to production at some level and are therefore necessary to maintain sustainable fisheries and contribute to a healthy ecosystem. As stated in the NMFS EFH Technical Guidelines, "When considering EFH requirements of a managed species, Councils must describe, identify, and conserve enough habitat to support the total population (biological production), not just the individual fish that are removed by fishing (the fisheries production). If the current stock size supports the long-term potential yield of the fishery, then EFH should be adequate to support that population and its contribution to a healthy ecosystem." Simply stated, Alternative 2 is a more precautionary approach to EFH designation than Alternative 3.

Alternative 3 differs from Alternative 2 in that EFH would be defined as a subset of all habitat within a general distribution [e.g., areas of known concentration] in the case of level 2 information or greater for a species life stage for stocks deemed to be in healthy condition. For level 0 and 1 information, EFH would be defined as all habitat within a general distribution for a species life stage. Therefore, under Alternative 3, designation of EFH would result in somewhat smaller areas (areas of known concentration versus general distribution) for those species with level 2 information or greater for a species life stage. Areas of known concentrations are based on current information that does not adequately address unpredictable annual differences in spatial distributions of a life stage, nor changes due to long-term shifts in oceanographic regimes. Identified known concentrations are based primarily on survey information, which is limited to certain seasons (chiefly summer). Furthermore, to define EFH as known concentrations may omit important habitats occupied by a species and that are necessary to maintain healthy stocks within the ecosystem. Section 6.0 contains further information and examples on the differences between Alternatives 2 and 3.

2.4 Impacts on Endangered or Threatened Species

The ESA provides for the conservation of endangered and threatened species of fish, wildlife, and plants. The program is administered jointly by the Department of Commerce (NMFS) for most marine species, and the Department of Interior (USFWS) for terrestrial and freshwater species.

The ESA procedure for identifying or listing imperiled species involves a two-tiered process, classifying species as either threatened or endangered, based on the biological health of a species. Threatened species are those likely to become endangered in the foreseeable future [16 U.S.C. §1532(20)].

Endangered species are those in danger of becoming extinct throughout all or a significant portion of their range [16 U.S.C. §1532(20)]. The Secretary, acting through NMFS, is authorized to list marine mammal and fish species. The Secretary of Interior, acting through the USFWS, is authorized to list all other organisms.

In addition to listing species under the ESA, the critical habitat of a newly listed species must be designated concurrent with its listing to the "maximum extent prudent and determinable" [16 U.S.C. §1533(b)(1)(A)]. The ESA defines critical habitat as those specific areas that are essential to the conservation of a listed species and that may be in need of special consideration. The primary benefit of critical habitat designation is that it informs Federal agencies that listed species are dependent upon these areas for their continued existence, and that consultation with NMFS on any Federal action that may affect these areas is required. Some species, primarily the cetaceans, listed in 1969 under the Endangered Species Conservation Act and carried forward as endangered under the ESA, have not received critical habitat designations.

Listed Species. The following species are currently listed as endangered or threatened under the ESA and occur in the GOA and/or BSAI:

Endangered

Northern Right Whale	<i>Balaena glacialis</i>
Bowhead Whale ¹	<i>Balaena mysticetus</i>
Sei Whale	<i>Balaenoptera borealis</i>
Blue Whale	<i>Balaenoptera musculus</i>
Fin Whale	<i>Balaenoptera physalus</i>
Humpback Whale	<i>Megaptera novaeangliae</i>
Sperm Whale	<i>Physeter macrocephalus</i>
Snake River Sockeye Salmon	<i>Oncorhynchus nerka</i>
Short-tailed Albatross	<i>Diomedea albatrus</i>
Steller Sea Lion ²	<i>Eumetopias jubatus</i>

Threatened

Snake River Fall Chinook Salmon	<i>Oncorhynchus tshawytscha</i>
Snake River Spring/Summer Chinook Salmon	<i>Oncorhynchus tshawytscha</i>
Steller Sea Lion ³	<i>Eumetopias jubatus</i>
Spectacled Eider	<i>Somateria fishcheri</i>
Steller's Eider	<i>Polysticta stelleri</i>

Section 7 Consultations. Because scallop, BSAI crab, salmon, and groundfish fisheries are federally

¹species is present in Bering Sea area only.

²listed as endangered in waters west of Cape Suckling.

³listed as threatened in waters east of Cape Suckling.

regulated activities, any negative affects of the fisheries on listed species or critical habitat and any takings⁴ that may occur are subject to ESA section 7 consultation. NMFS initiates the consultation and the resulting biological opinions are issued to NMFS. The Council may be invited to participate in the compilation, review, and analysis of data used in the consultations. The determination of whether the action "is likely to jeopardize the continued existence of" endangered or threatened species or to result in the destruction or modification of critical habitat, however, is the responsibility of the appropriate agency (NMFS or USFWS). If the action is determined to result in jeopardy, the opinion includes reasonable and prudent measures that are necessary to alter the action so that jeopardy is avoided. If an incidental take of a listed species is expected to occur under normal promulgation of the action, an incidental take statement is appended to the biological opinion.

Section 7 consultations have been done for all the above listed species, some individually and some as groups. Below are summaries of the consultations.

Endangered Cetaceans. NMFS concluded a formal section 7 consultation on the effects of the BSAI and GOA groundfish fisheries on endangered cetaceans within the BSAI and GOA on December 14, 1979, and April 19, 1991, respectively. These opinions concluded that the fisheries are unlikely to jeopardize the continued existence or recovery of endangered whales. Consideration of the bowhead whale as one of the listed species present within the area of the Bering Sea fishery was not recognized in the 1979 opinion, however, its range and status are not known to have changed. No new information exists that would cause NMFS to alter the conclusion of the 1979 or 1991 opinions. Of note, however, are observations of Northern Right Whales during Bering Sea stock assessment cruises in the summer of 1997 (NMFS per. com). Prior to these sightings, and one observation of a group of two whales in 1996, confirmed sightings had not occurred.

Steller sea lion. The Steller sea lion range extends from California and associated waters to Alaska, including the Gulf of Alaska and Aleutian Islands, and into the Bering Sea and North Pacific and into Russian waters and territory. In 1997, based on biological information collected since the species was listed as threatened in 1990 (60 FR 51968), NMFS reclassified Steller sea lions as two distinct population segments under the ESA (62 FR 24345). The Steller sea lion population segment west of 144°W. longitude (a line near Cape Suckling, Alaska) is listed as endangered; the remainder of the U.S. Steller sea lion population maintains the threatened listing.

NMFS designated critical habitat in 1993 (58 FR 45278) for the Steller sea lion based on the Recovery Team's determination of habitat sites essential to reproduction, rest, refuge, and feeding. Listed critical habitats in Alaska include all rookeries, major haul-outs, and specific aquatic foraging habitats of the BSAI and GOA. The designation does not place any additional restrictions on human activities within designated areas. No changes in critical habitat designation were made as result of the 1997 re-listing.

Beginning in 1990 when Steller sea lions were first listed under the ESA, NMFS determined that both groundfish fisheries may adversely affect Steller sea lions, and therefore conducted Section 7 consultation on the overall fisheries (NMFS 1991), and subsequent changes in the fisheries (NMFS 1992). On January 26, 1996, two biological opinions on the BSAI and GOA fisheries' effects on Steller sea lions were issued by NMFS. Both concluded that these fisheries and the 1996 harvest levels were not likely to jeopardize the continued existence and recovery of the Steller sea lion, nor to result in the destruction or adverse modification of critical habitat. NMFS supplemented the biological opinions for

⁴ the term "take" under the ESA means "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct" (16 U.S.C. §1538(a)(1)(B)).

the 1998 Atka mackerel fishery in the BSAI and GOA pollock fishery with potential impacts of those fisheries on Steller sea lions.

On February 26, 1998, NMFS determined that the 1996 biological opinion on the effects of the BSAI groundfish fishery on Steller sea lions remained valid for the 1998 BSAI groundfish fishery. On March 2, 1998, NMFS issued a biological opinion concluding that the 1998 GOA groundfish fishery was not likely to jeopardize the continued existence and recovery of Steller sea lions, nor to adversely modify critical habitat. NMFS noted that the biological opinion only addressed the 1998 fishery, not the continued implementation of the GOA FMP beyond 1998. On August 20, 1998, NMFS reinitiated section 7 consultation on: (1) authorization of an Atka mackerel fishery under the BSAI groundfish FMP between 1999 and 2002; (2) authorization of a pollock fishery under the BSAI groundfish FMP between 1999 and 2002; and (3) authorization of a pollock fishery under the GOA groundfish FMP between 1999 and 2002. A biological opinion dated December 3, 1998, modified December 16, 1998, was issued for authorization of Atka mackerel and walleye pollock fisheries in the BSAI and walleye pollock fisheries in the GOA, which concluded that the pollock fisheries in the BSAI and GOA are likely to jeopardize the continued existence of the Steller sea lion. A biological opinion dated December 22, 1998, was issued for authorization of the BSAI and GOA groundfish fisheries based on total allowable catch specifications for 1999, which concluded that the proposed groundfish fisheries are not likely to jeopardize the Steller sea lion.

Pacific Salmon. No species of Pacific salmon originating from freshwater habitat in Alaska are listed under the ESA. Those species that are listed originate in freshwater habitat in the headwaters of the Columbia (Snake) River. During ocean migration to the Pacific marine waters a small (undetermined) portion of the stock go into the Gulf of Alaska as far east as the Aleutian Islands. In that habitat they are mixed with hundreds to thousands of other stocks originating in the Columbia River, British Columbia, Alaska, and Asia. The listed fish are not visually distinguishable from the other, unlisted, stocks. Mortal take of them in the chinook salmon bycatch portion of the fisheries is assumed based on sketchy abundance, timing, and migration pattern information.

NMFS designated critical habitat in 1992 (57 FR 57051) for the Snake River sockeye, Snake River spring/summer chinook, and Snake River fall chinook salmon. The designations did not include any marine waters, and therefore does not include any of the habitat where the groundfish fisheries are promulgated.

NMFS has issued two biological opinions and no-jeopardy determinations for listed Pacific salmon in the Alaska groundfish fisheries (NMFS 1994, NMFS 1995). Conservation measures were recommended to improve the level of information about and reduce salmon bycatch. The no jeopardy determination was based on the assumption that if total salmon bycatch is controlled, the impacts to listed salmon are also controlled. The incidental take statement appended to the second biological opinion allowed for take of one Snake River fall chinook and zero take of either Snake River spring/summer chinook or Snake River sockeye, per year. As explained above, it is not technically possible to know if any have been taken. Compliance with the biological opinion is stated in terms of limiting salmon bycatch per year to under 55,000 and 40,000 for chinook salmon, and 200 and 100 sockeye salmon in the BSAI and GOA fisheries, respectively.

NMFS has issued six biological opinions and no-jeopardy determinations for listed Pacific salmon in the Southeast Alaska Salmon Troll fishery (NMFS 1993; 1994; 1995; 1996; 1997; 1998). Conservation measures contained in these past opinions have varied somewhat, but generally have been

recommendations limiting chinook harvest in the commercial all-gear fishery consistent with US/Canada treaty negotiations. Each of the first five biological opinions contained one-year expiration dates, but the June 29, 1998 opinion will remain in effect as long as the 1996 U.S. Letter of Agreement regarding Chinook Salmon Fisheries in Alaska remains in place, or until a bilateral agreement between the U.S. and Canada regarding the management of chinook fisheries under PSC jurisdiction is proposed.

Additional evolutionarily significant units (ESUs) of Pacific salmon are currently in the process of being listed under the ESA. Depending on the final listing decisions, additional Section 7 consultations or Section 10 incidental take permits will be required for salmon fisheries in waters off Alaska.

Short-tailed albatross. The entire world population in 1995 was estimated as 800 birds; 350 adults breed on two small islands near Japan. The population is growing but is still critically endangered because of its small size and restricted breeding range. Past observations indicate that older short-tailed albatrosses are present in Alaska primarily during the summer and fall months along the shelf break from the Alaska Peninsula to the Gulf of Alaska, although 1- and 2-year old juveniles may be present at other times of the year (USFWS 1993). Consequently, these albatrosses generally would be exposed to fishery interactions most often during the summer and fall--during the latter part of the second and the whole of the third fishing quarters.

Short-tailed albatrosses reported caught in the longline fishery include two in 1995, one in September 1996, and none in 1997. Both 1995 birds were caught in the vicinity of Unimak Pass and were taken outside the observers' statistical samples.

Formal consultation on the effects of the groundfish fisheries on the short-tailed albatross under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS) concluded that BSAI and GOA groundfish fisheries would adversely affect the short-tailed albatross and would result in the incidental take of up to two birds per year, but would not jeopardize the continued existence of that species (USFWS 1989). Subsequent consultations for changes to the fishery that might affect the short-tailed albatross also concluded no jeopardy (USFWS 1995, USFWS 1997). The USFWS does not intend to renew consultation for the 1998 Total Allowable Catch specification process. However, the incidental take limit established in the 1997 USFWS biological opinion is valid for 1997, 1998, and extended into 1999. However, NMFS must reinitiate consultation for the 1999 groundfish hook-and-line fisheries.

Spectacled Eider. These sea ducks feed on benthic mollusks and crustaceans taken in shallow marine waters or on pelagic crustaceans. The marine range for spectacled eider is not known, although Dau and Kitchinski (1977) review evidence that they winter near the pack ice in the northern Bering Sea. Spectacled eider are rarely seen in U.S. waters except in August through September when they molt in northeast Norton Sound and in migration near St. Lawrence Island. Recent satellite telemetry data and three years of aerial surveys indicate that spectacled eiders spend the winter in exposed waters between St. Matthew and St. Lawrence Islands, or in open leads slightly west of the inter-island area (USFWS 1998c). Although the species is noted as occurring in the GOA and BSAI management areas no evidence that they interact with these groundfish fisheries exists.

Steller's Eider. The Alaska breeding population of the Steller's eider was listed as threatened in 1997. These are sea ducks that spend the majority of the year in shallow, nearshore marine waters where they feed by diving and dabbling for molluscs and crustaceans. Principle foods in the marine areas include bivalves, crustaceans, polychaete worms, and molluscs (Metzner 1993, Petersen 1980, Troy and Johnson 1987). During the breeding season, Steller's eiders move inland in coastal areas, where they nest adjacent to shallow ponds or within drained lake basins (Flint et al. 1984, King and Dau 1981, Quakenbush and Cochrane 1993). Although they are noted as occurring in the GOA and BSAI

management areas, no evidence exists that they interact with the groundfish fisheries or compete with the target species for prey.

As noted previously in the discussion of the short-tailed albatross, from 1992 to 1994 NMFS initiated informal consultations with USFWS on the annual TAC specifications for the BSAI and GOA. USFWS concurred that the proposed actions would not jeopardize the continued existence of any listed species under its jurisdiction beyond those already considered in the 1989 biological opinion. USFWS reached this conclusion for both the spectacled eider and the Steller's eider (candidate species at the time) due to the apparently limited overlap in range between these eider species and the groundfish fisheries.

Conditions for Reinitiation of Consultation. For all ESA listed species, consultation must be reinitiated if: the amount or extent of taking specified in the Incidental Take Statement is exceeded, new information reveals effects of the action that may affect listed species in a way not previously considered, the action is subsequently modified in a manner that causes an effect to listed species that was not considered in the biological opinion, or a new species is listed or critical habitat is designated that may be affected by the action.

Impacts of the Alternatives on Endangered or Threatened Species. Designation of EFH under Alternative 2 or 3 would not affect the prosecution of the salmon, scallop, BSAI crab or groundfish fisheries of the BSAI or GOA in a way not previously considered in the above consultations. The EFH alternatives are administrative in nature, and no impact on the human environment will result from any alternative because no regulatory changes are proposed with this action. It is expected that implementation of the preferred alternative will be of long-range benefit to the human environment. Improved understanding of EFH, and future management measures taken to protect EFH, can be expected to result in increases in fish populations upon which threatened and endangered species feed. None of the alternatives would affect overall Total Allowable Catch (TAC) amounts, Prohibited Species Catch (PSC) limits, or takes of listed species. Therefore, none of the alternatives are expected to have a significant impact on endangered, threatened, or candidate species.

2.5 Impacts on Marine Mammals

Marine mammals not listed under the ESA that may be present in the BSAI include cetaceans, [minke whale (*Balaenoptera acutorostrata*), killer whale (*Orcinus orca*), Dall's porpoise (*Phocoenoides dalli*), harbor porpoise (*Phocoena phocoena*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), and the beaked whales (e.g., *Berardius bairdii* and *Mesoplodon spp.*)] as well as pinnipeds [northern fur seals (*Callorhinus ursinus*), and Pacific harbor seals (*Phoca vitulina*)] and the sea otter (*Enhydra lutris*).

None of the alternatives would affect takes of marine mammals. Because the alternatives are administrative in nature and do not impose any regulatory changes, they will not alter the harvest of groundfish, crab, scallops, or salmon. Therefore, none of the alternatives are expected to have a significant impact on marine mammals.

2.6 Coastal Zone Management Act

Implementation of each of the alternatives would be conducted in a manner consistent, to the maximum extent practicable, with the Alaska Coastal Management Program within the meaning of Section 30(c)(1) of the Coastal Zone Management Act of 1972 and its implementing regulations.

2.7 Conclusions or Finding of No Significant Impact

None of the FMP amendment alternatives are likely to significantly affect the quality of the human environment, and the preparation of an environmental impact statement for the proposed action is not required by Section 102(2)(C) of the National Environmental Policy Act or its implementing regulations.

Assistant Administrator for Fisheries, NOAA

Date